

WHAT IS CLAIMED IS:

Sub
AT

- 5 1. A method for sending a message from a service center system to a remote system, comprising:
- providing a first message queue for the service center system to store the status of the message;
- providing a second message queue for the remote system to store the status of each message received;
- connecting a host message agent to the first message queue;
- 10 connecting a remote message agent to the second message queue;
- passing the message from the first message queue to the host message agent;
- updating the status of the message in the first message queue;
- 15 sending the message from the host message agent to the remote message agent across a communications medium;
- passing the message from the remote message agent to the second message queue;
- updating the status of the message in the second message queue;
- 20 sending an acknowledgment of the message from the remote message agent to the host message agent across the communications medium;
- updating the status of the message in the first message queue.
2. The method as in Claim 1 where the host message agent will periodically send the message again if an acknowledgement of the message is not received.
- 25 3. The method as in Claim 1 wherein the communication medium comprises at least in part the Internet.
4. The method as in Claim 3 wherein the remote system communicates with the Internet via a wireless communications network.
- 30

5. The method as in Claim 4 wherein the wireless communications network is a cellular radio frequency network.

6. The method as in Claim 1 wherein the communications medium is available between the host message agent and the remote message agent on an intermittent basis.

7. A system for sending a message from a service center system to a remote system, comprising:

a first message queue in communication with the service center system;

a host message agent in communication with the first message queue;

a remote message agent in communication with the host message agent via a communications medium;

a second message queue attached to the remote message agent and to the remote system;

the first message queue configured to store the message and the status of the message, and to receive updates to the status of the message from the host message agent, the host message agent sending the message to the remote message agent across the communications medium, the remote message agent sending an acknowledgement of the message to the host message agent upon receipt of the message, and the remote message agent passing the message to the second message queue for access by the remote system.

8. The system as in Claim 7 wherein the host message agent periodically sends the message to the remote system again until an acknowledgement is received.

9. The system as in Claim 7 wherein the communications medium comprises at least in part the Internet.

10. The system as in Claim 9 wherein the remote message agent communicates with the Internet via a wireless network.

11. The system as in Claim 7 wherein the communications medium is available between the host message agent and the remote message agent on an intermittent basis.

5 Sub
12. A method of managing service information at a remote system, comprising:

receiving a work order, including service specific data for a requested service for equipment, wherein said work order includes tasks to be performed while providing said requested service;

10 displaying the work order on a touch sensitive display of said remote system;

checking off one or more of the displayed tasks by touching a portion of the touch sensitive display related to a corresponding task;

transmitting a parts order related to said requested service;

15 receiving a customer's signature entered on said display; and closing the work order.

13. The method as defined in Claim 12, further comprising transmitting status information related to said requested service to a service center.

20 14. The method as defined in Claim 12, further comprising receiving a service history of said equipment.

15. The method as defined in Claim 12, further comprising:

25 providing a first icon towards a first side of said touch sensitive display, said first icon sized to be activated by an operator's first thumb, wherein activation of said first icon causes a cursor to move in a first direction; and

providing a second icon towards a second side of said touch sensitive display, said second icon sized to be activated by an operator's second thumb, wherein activation of said second icon causes said cursor to move in a second direction

30

16. The method as defined in Claim 12, wherein said remote system executes a Windows CE operating system.

17. The method as defined in Claim 12, wherein said work order is viewable using an Internet HTML-compatible browser executing on said remote system.

18. A method of managing service information at a service center, comprising:

receiving a customer request for service;

automatically selecting which technician should provide the requested service;

generating a work order, including service specific data for the requested service, wherein at least a portion of service specific information is automatically entered from a database;

sending the work order to the selected technician; and

receiving confirmation that the work order was received.

19. A method as in Claim 18 where the step of sending the work order to the selected technician comprises transmitting the work order over a wireless network to a remote system associated with the technician.

20. The method as defined in Claim 18, wherein the technician is selected based on at least the technician's proximity to the equipment to be serviced.

21. The method as defined in Claim 18, wherein the technician is selected based on at least a customer preference.

22. The method as defined in Claim 18, further providing the technician with instructions on how the service is to be performed.

23. The method as defined in Claim 19, further providing the technician with a procedures form displayed on a touch sensitive display of said remote system, wherein the form includes service instruction steps which are configured to be checked off by the technician as the steps are completed.

24. The method as defined in Claim 19, further providing the technician with a catalog of parts which may be need for the service operation.

25. A system including a server couplable to a plurality of client computers, said server configured to execute instructions comprising at least:

- a first instruction used receive a customer request for equipment service;
- a second instruction used to select which technician should provide the requested service;
- a third instruction configured to generate a work order based on at least the customer request;
- a fourth instruction configured to transmit the work order over a wireless network to a first client computer associated with the selected technician; and
- a fifth instruction configured to receive confirmation via the first client computer that the work order was received.

26. The system as defined in Claim 25, further comprising:

- a first client computer, where said first client computer is coupled to said server; and
- a second client computer coupled to said server, wherein said first client computer is associated with a first service company and said second client computer is associated with a second service company.

27. The system as defined in Claim 25, further comprising said first client computer networked to said server, wherein if said network is interrupted, said first client computer operates autonomously.

28. The system as defined in Claim 25, further comprising a pager coupled to receive information related to the work order from the server.

29. The system as defined in Claim 25, wherein said work order is generated as an HTML-compatible form readable using a browser executing on said first client.

30. The system as defined in Claim 25, wherein said server provides data to said client computers using at least a first customizable template.

31. The system as defined in Claim 25, wherein said server receives status data from at least said first client computer, and uses the status information to generate a bill.

32. A method of transmitting a work order, comprising:
providing a selection of protocols from which the user can choose at least one to be used to transmit data, said data including at least a work order;
receiving a protocol selection from said user;
generating a work order using a service center system in response to a service request; and
transmitting said work order to a remote system using said selected protocol.

33. The method as defined in Claim 32, where said remote system executes a Windows operating system.

34. The method as defined in Claim 32, where said remote system executes a Windows CE operating system.

35. The method as defined in Claim 32, where said remote system executes a Palm operating system.

36. A method of transmitting a service-related message from a service center system to a remote system over a wireless network, comprising:

generating a service-related message in said service center system;

providing the service-related message to a first software module
executing in said service center system;

transmitting the service related message from the first software module
over the Internet to a radio frequency cell transmitter which forms part of a
wireless network; and

transmitting the service-related message from the cell transmitter to a
second software module executing in the remote system, wherein said remote
system further executes field service software.

37. The method of Claim 36, wherein said first software module is a host
messaging agent, and second software module is a remote messaging agent.

38. The method of Claim 36, wherein the structures of said first software
module and said first software module are symmetric.

39. The method of Claim 36, wherein said first software module and said
first software module use the same application program interface.

40. The method of Claim 36, further comprising making the first software
module appear logically connected directly to said wireless network.

41. The method of Claim 36, wherein the service related message is
transmitted only once over said wireless network.

42. The method of Claim 36, wherein said first software module is
configured to transmit data at a first rate, and second software module is configured to
receive data at a second rate which is different than said first rate.

43. A method of transmitting a service-related message from a server to a client over a wireless network, comprising:

generating a service-related message in said server;

determining that the client is disconnected from the server;

5 storing the service-related message in a queue while the client is disconnected; and

transmitting the service-related message from the queue to the client when the client is reconnected to the server.

an

10

44. A method of providing a computer user interface comprising:

displaying a first tab associated with a first page on a touch-sensitive portable computing device display, wherein said first tab is sized to be activated by an operator's first thumb; and

15

displaying a second tab associated with a second page on said touch-sensitive portable computing device display, wherein said second tab is sized to be activated by an operator's second thumb

004444-031400

Adg
B7